unlikely to be a factor in the prolonged survival in cases 9 and 11. These historical data support the view that adjunct antibody therapy may be of benefit in the future management of patients with cryptococcal meningitis.

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Reply

Sir—We thank Dr. Seaton for his letter and the supportive comments regarding the potential value of immunotherapy. Our impression of the article by Cox and Tolhurst that was cited by Dr. Seaton is that those patients received autologous vaccine therapy and not serum therapy.

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Septic Thrombophlebitis of the Portal Vein

Sir—We read with interest the article by Plemmons et al. [1]. We treated a patient who had pylephlebitis associated with appendicitis. A 38-year-old woman without a medical or surgical history presented with complaints of vomiting, diarrhea, fever, and rigors. Results of the initial physical examination were normal. Laboratory studies showed a WBC count of 5,500/mm³ (89% segmented neutrophils), a platelet count of 84,000/mm³, and normal liver function. The patient received therapy with oral amoxicillin and then with oral ofloxacin; there was no effect on her fever and diarrhea. Eight days after the onset of symptoms, she was admitted to the hospital. Fever persisted (temperature to 40°C) and was associated with intermittent confusion.

Physical examination revealed tenderness of the right upper quadrant. There was no meningism or focal neurological defects. A lumbar puncture was performed, and results of CSF analysis were normal. Liver function tests showed cholestasis with an alkaline phosphatase level of 200 U/L (normal level, <90 U/L) and a γ-glutamyltransferase level of 389 U/L (normal level, <28 U/L). Five blood cultures were positive for Bacteroides fragilis.

On the second hospital day, the patient began to receive therapy with ceftriaxone and metronidazole. Ultrasonography showed hepatomegaly and a partial thrombus in the portal vein without a liver abscess, gallstone, or dilated bile duct. Heparin was added to the patient’s medication regimen after the results of ultrasonography were obtained and administration of oral contraceptives was stopped. Since the abdomen remained tender, ultrasonography was performed again 4 days later and revealed a collection of peritoneal fluid surrounding the distal ileum. Colonoscopy of the sigmoid and left colon was unremarkable. A laparotomy was performed, and appendicitis was diagnosed.

The patient fully recovered after an appendectomy; she completed 4 weeks of intravenous therapy with antibiotics and heparin followed by 2 weeks of therapy with oral antibiotics (amoxicillin/clavulanic) and 2 months of therapy with low-molecular-weight heparin. Follow-up with ultrasonography showed partial resolution of the portal vein thrombus.

Our observation is in agreement with the findings of Plemmons et al. [1]. In our patient’s case, pylephlebitis was associated with appendicitis and high-grade bacteremia due to B. fragilis. Severe sepsis was the predominant feature, leading us to search for the source of infection. The early initiation of antibiotic therapy allowed rapid control of a systemic infection. The thrombus was diagnosed by ultrasonography, thus confirming the value of this technique in the diagnosis of portal vein phlebitis. Since there was

References
no complete clinical response to medical therapy, we repeated the ultrasonography and decided—on the basis of the presence of peritoneal fluid—to perform a laparotomy, which confirmed appendicitis.

The value of anticoagulation in the treatment of portal vein thrombosis cannot be assessed in our case. We did not find an underlying coagulation disorder (no deficiency in protein C, protein S, or antithrombin III; no circulating anticoagulant; no antibody to cardiolipin; no platelet dysfunction; and no factor V Leiden mutation), despite persistent thrombocytopenia. However, the association of oral contraceptives with the occurrence of a portal vein thrombus complicating appendicitis cannot be ruled out.

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Reference

Antibiotic-Lock Technique for the Treatment of Central Venous Catheter Infections

Sir—We recently read the article by Benoit et al. [1] about the use of the “antibiotic-lock technique” (ALT) to treat bloodstream infections arising from subcutaneously tunneled central venous catheters in patients receiving parenteral nutrition at home. The potential advantages of the ALT are that a high concentration of antibiotic can be delivered for a prolonged period inside the infected catheter [2], side effects and toxicity associated with systemic administration of antibiotics can be avoided, drug costs can be decreased, and the treatment can be administered at home [1, 3].

Previous reports [2–7] (some of which were not cited by Benoit et al.) suggested that ALT was efficacious for the control of bacterial catheter-related sepsis. Nevertheless, we would like to stress that the clinical evaluation of the efficacy and safety of this mode of therapy is only in the preliminary stages at this time. Benoit and colleagues stated that in earlier reports intraluminal antibiotics consistently cured bacterial catheter-related sepsis [2, 3] and that, when the cases in their study were combined with the previously reported cases, ALT achieved an overall cure rate of >95%; however, these statements appear unwarranted. Indeed, very different criteria were used by the investigators in these studies for the definition of catheter-related sepsis and for the assessment of treatment outcome.

The failure of the ALT in the study by Benoit et al. was determined on the basis of the following criteria: a fever that persisted for >3 days, reisolation of the same pathogen from blood cultures within 3 months, or the development of metastatic infection. In the study by Messing et al. [2], one patient who presented had seven episodes (out of a total of 22 episodes of reported infections) in which the same catheter was successively infected; two episodes were due to Klebsiella oxytoca. two were due to Enterobacter agglomerans, and two were due to both organisms. As the delay between these various episodes of infection was not specified, the rate of treatment failure associated with these episodes of reinfections cannot be assessed with use of the criteria of Benoit et al. Moreover, etiologic pathogens recovered from central venous catheters in this study appear unusual (mostly gram-negative bacilli) when compared with those reported in the literature and might indicate that the infusate was contaminated [8].

In a second report on the ALT [4], Messing et al. reported that this technique was used successfully to treat 25 (93%) of 27 infections. However, in this series, three infections recurred at 8, 12, and 12 days, respectively, after completion of therapy but were nevertheless considered as having been successfully treated. Moreover, one episode of catheter-related infection due to Staphylococcus aureus was treated with systemic antibiotics for only 2 days although the optimal duration of iv antibiotic therapy for uncomplicated catheter-related S. aureus bacteremia should not be <10 days [8].

These two consecutive studies of Messing et al. [2, 4] compared the efficacy of ALT alone vs. ALT combined with systemic antibiotics. There is a major bias in this comparison because the treatment modality was chosen according to the physician’s clinical judgment. Therefore, it is possible that patients with more-severe presentations were included in the arm of the study in which ALT was given in combination with systemic antibiotics. However, the investigators concluded that the efficacy of ALT alone is comparable with that of ALT administered after an initial short course of systemic antibiotic therapy. The design of their studies clearly does not allow such a conclusion to be made.

In the study by Benoit et al. [1], one episode of polymicrobial catheter-related bacteremia (due to Chryseomonas luteola, Klebsiella pneumoniae, and Citrobacter diversus) was treated only with intraluminal therapy. The investigators justify this treatment since metastatic infection is rarely a complication of catheter-related sepsis except when the latter is due to S. aureus [9]. However, in the series of cases reported by Arnow et al. [9] in which the complications of 102 episodes of intravascular catheter-related sepsis were described, the risk of major complications was highest in the episodes of iv catheter-related sepsis caused by multiple pathogens. Moreover, only 10 episodes of infection due to enteric gram-negative bacilli were reported in this series, and none of these episodes involved metastatic infection. We wonder whether the therapeutic approach in the article by Benoit et al. can be adopted on the basis of these limited data, as they appear to be experimental (i.e., in comparison with the usual recommendations).

On the basis of available evidence, ALT appears to be promising as a treatment for bloodstream infections arising from subcutaneously tunneled central venous catheters. However, many questions about this treatment remain unanswered. For instance, the efficacy of systemic antibiotic therapy alone vs. ALT combined with systemic antibiotics for patients with central venous catheter–related bacteremia must be determined, the efficacy of systemic antibiotic